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Applicant's election without traverse of Group I in the reply filed on 12/10/2009 is acknowledged.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 30-32, 36-41 and 47-51 are rejected under 35 U.S.C. 102(b) as being anticipated by KOEPKE ET AL 4,479,987.

KOEPKE ET AL teaches the design of a curtain coating apparatus which is comprised of the following elements: a nozzle device for generating a curtain of at least one coating fluid falling onto the substrate; and a curtain guiding structure comprising a guiding face which laterally guides the curtain; wherein the guiding face is convex to the curtain over a width which, measured crossways to the curtain, exceeds the curtain thickness. Thus every element of the apparatus set forth in claim 30 is taught by KOEPKE ET AL. With respect to claim 31, the guiding face of the KOEPKE ET AL curtain coater is curved crossways to the curtain. With respect to claim 32, guiding face of the KOEPKE ET AL curtain coater has a cylindrical face. With respect to claim 36, guiding face of the KOEPKE ET AL curtain guiding structure includes a pipe. With respect to claims 37-41, KOEPKE ET AL teaches a fluid supply connected to the curtain guiding structure and configured to supply an auxiliary fluid to the guiding face. Further, KOEPKE ET AL shows in its figures that the curtain guiding structure has a hollow profile comprising a hollow space and a shell surrounding the hollow space which is permeable to the auxiliary fluid in at least a circumferential segment forming the guiding face wherein the circumferential segment of the curtain guiding structure consists of a porous material. Further, KOEPKE ET AL shows in its figures that the curtain guiding structure is sealed against penetration by the auxiliary fluid at least over a part of the shell that does not form the guiding face. Finally, KOEPKE ET AL teaches that the auxiliary fluid forms a border film which wets the guiding face. The guiding structure of the KOEPKE ET AL curtain coater is capable of exhibiting coating velocity which

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corresponds to a fall velocity of the curtain, at least over a large extent of the guiding face due to the gravitational forces which are equal on the curtain and auxiliary fluid. With respect to claims 47-55, KOEPKE ET AL shows that its curtain coating system which includes the following: a nozzle surface inclined to the horizontal; an exit opening through which the coating fluid can be supplied to the nozzle surface such that the coating fluid forms a downward-flowing film current on the nozzle surface; a nozzle lip which forms a downstream end of the nozzle surface; and a nozzle side boundary for laterally restricting the film current. Further, KOEPKE ET AL shows the nozzle side boundary exhibits a height relative to the nozzle surface which is capable of substantially corresponding to a respectively local thickness of a film current, between the nozzle lip and a point upstream of the nozzle lip, which at least substantially corresponds to a respectively local thickness of the film current, such that the film current is prevented from flowing over the nozzle side boundary and coating fluid of the film current is prevented from being drawn up the nozzle side boundary. , KOEPKE ET AL shows its curtain coater includes a nozzle device comprises a number of exit openings for coating fluids, in succession in the current direction of the film current, in order to be able to form a multiple-coat film current on the nozzle surface, and wherein the nozzle side boundary exhibits a height relative to the nozzle surface which is capable of substantially corresponding to a respectively local thickness of the film current from the nozzle lip to at least the most downstream or the least most upstream of the exit openings.

Claims 33-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over KOEPKE ET AL 4,479,987 in view of NISHIDA ET AL 5,304,402.

KOEPKE ET AL is applied for the reasons noted above but fails to teach curvature radius of the guiding face of the curtain guiding structure. However, it would have been obvious to optimize the curvature radius and the arc angle of the guiding face of the curtain guiding structure such it is within the scope of the claims such as disclosed by NISHIDA ET AL for the taught advantage of increasing the uniformity of the curtain applied to the substrate.

Claim 43 is rejected under 35 U.S.C. 103(a) as being unpatentable over KOEPKE ET AL 4,479,987 in view of HUGHES 3,508,947.

KOEPKE ET AL is applied for the reasons noted above but fails to teach the adjustability of its guiding structure relative to the nozzle. However, it would have been obvious to modify the KOEPKE ET AL curtain coater by providing a table structure on which is arranged a means for adjusting the guiding structure relative to the nozzle device such as taught by HUGHES for obvious reason to adjust the position of spreader 33.

Claims 42, 44-46 and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over KOEPKE ET AL 4,479,987 in view of SCHWEIZER ET AL 6,048,582.

KOEPKE ET AL is applied for the reasons noted above but fails to teach a suction means and separating means. However, it would have been obvious to modify the KOEPKE ET AL curtain coating apparatus to include a suction means having an opening arranged in the manner set forth in the claim 45 and

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separating means such as taught by SCHWEIZER ET AL arranged below its guiding face and relative to the substrate for the taught advantage of improving the quality of the coated edge on the coated substrate. Thus claims 44-46 and 59 are obvious over the above cited references. With respect to claim 42, KOEPKE ET AL fails to teach the wall thickness of the guide structure varies. However, it would have been obvious to modify the KOEPKE ET AL curtain coater apparatus by substituting its guiding structure with another such as taught by SCHWEIZER ET AL for the taught advantage of improving the quality of the coated edge on the coated substrate.

Claims 52-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over KOEPKE ET AL 4,479,987 in view of EP 0 051 238.

KOEPKE ET AL is applied for the reasons noted above but fails to teach a nozzle device comprises a fluid supply by means of which an auxiliary fluid can be supplied to the nozzle side boundary. However, it would have been obvious given the modifications of the KOEPKE ET AL curtain coater apparatus by substituting its side boundary with another such as taught by EP '238 and include a nozzle device which includes a fluid supply by means of which an auxiliary fluid can be supplied to the nozzle side boundary in order to form a lubricating film of the auxiliary fluid, which separates the film current from the nozzle side boundary, at least in a longitudinal section of the nozzle side boundary for the obvious advantage of improving the quality of the coated edge on the coated substrate. With respect to claims 53-54, EP '238 nozzle side boundary comprises a wall structure which is permeable and is formed from a porous material to the

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auxiliary fluid and connected to the fluid supply. With respect to claim 55, in the modified KOEPKE ET AL curtain coater apparatus the lubricating film is formed downstream of the exit opening or a most downstream exit opening of a number of exit openings.

Claims 56-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over KOEPKE ET AL 4,479,987 in view of YAPEL ET AL 6,048,582.

KOEPKE ET AL is applied for the reasons noted above but fails to teach a edge of the side boundary is formed at an angle within the scope of the claim. However, it would have been obvious to modify the KOEPKE ET AL curtain coater apparatus by providing its edge boundary with an enclosed edge angle within the scope of the claim such as taught by YAPEL ET AL for the taught advantage of reducing production losses due to uneven edges.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brenda A. Lamb whose telephone number is (571) 272-1231. The examiner can normally be reached on Wednesday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine Norton, can be reached on (571) 272-1465. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through

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